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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/579,954	05/22/2006	Yuan-Yong Yan	P0309GUS2A (BJ001d)	9285
7590 03/09/2009 Bridgestone Americas Holding Inc Chief Intellectual Property Counsel 1200 Firestone Parkway Akron, OH 44317-0001			EXAMINER BOYLE, ROBERT C	
			ART UNIT 1796	PAPER NUMBER
			MAIL DATE 03/09/2009	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/579,954

**Applicant(s)**

YAN ET AL.

**Examiner**

ROBERT C. BOYLE

**Art Unit**

1796

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 01/28/2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-3, 9, 10 and 21-35 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3, 9-10, 21-35 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-8508)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Response to Amendment***

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
2. Any rejections stated in the previous Office Action and not repeated below are withdrawn.
3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
4. Any rejections stated in the previous Office Action and not repeated below are withdrawn.
5. The new grounds of rejection set forth below are necessitated by applicant's amendment filed on January 28, 2009. In particular, claims 21-35 have been added. Although claims 21-35 correspond to claims 4-8 and 11-20, these latter claims were canceled prior to a first office action on the merits. Thus the presentation of claims 21-35, regardless of their relationship to claims 4-8 and 11-20, represent newly introduced limitations. Thus, the following action is properly made FINAL.

***Claim Rejections - 35 USC § 102***

6. Claims 1-3, 9-10, 21-27 and 30-35 are rejected under 35 U.S.C. 102(b) as being anticipated by Labauze, U.S. Patent 5,811,479.

7. The rejections regarding claims 1-3 and 9-10 are adequately set forth in paragraphs 2-5 in the office action mailed on October 28, 2008 and is incorporated here by reference.
8. As to claims 21-23, 30-31, Labauze teaches using hexamethylcyclotrisiloxane (column 5, line 13).
9. As to claim 24, Labauze teaches anionic polymerization in a solvent (column 4, lines 3-22).
10. As to claims 25, 32-35, Labauze teaches statistical polymerization of styrene and butadiene with 20-40 wt% styrene content and a 1,2 content from 4-80% (column 3, lines 29-67).
11. As to claims 26-27, Labauze teaches the primary amino groups and siloxane functionalities on the on the siloxane that is added to the polymer (column 2, lines 30-36; column 3, lines 1-16; column 4, lines 29-67; column 8, lines 46-56; column 10, lines 29-35).
12. In view of the above discussion, it is concluded that the cited present claims stand properly anticipated over the applied reference.

***Claim Rejections - 35 USC § 103***

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 28-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Labauze in view of Brockman U.S. Patent Application Publication 2002/0173607. The discussion with respect to Labauze as set forth in paragraphs 6-11 above is incorporated here by reference.

14. Labauze does not teach that the functional group has halogen atoms or a sultone. Brockman teaches reacting a living polymer with a functionalizing compound which includes epichlorohydrin, haloalkyltrialkoxysilanes, and propane sultone (abstract; paragraphs 0078-94). It would have been obvious to one of skill in the art that compound capable of functionalizing a living polymer as taught in Brockman could be used with the living polymer taught in Labauze because both teach functionalizing living polymers for use in tire compositions (Labauze: abstract; Brockman: paragraph 00179).
15. In view of the above discussion, it is concluded that the cited present claims stand properly obvious over the applied references.

### ***Response to Arguments***

16. Applicant's arguments filed on January 28, 2009 have been fully considered but they are not persuasive.
17. Applicant argues that examiner misconstrued the teachings of US'479. Applicant argues that US'479 does not teach *reaction* between the amine compounds added to the siloxane functionalized polymer as required by claims 1 and 9. Applicant points to language in US'479 which includes:

...an elastomer comprising at least one functionalized diene polymer bearing at the chain end a silanol function or a polysiloxane block having a silanol end, or modified along the chain by silanol functions at least one organosilane compound comprising an amine or imine function in accordance with general formula I. (column 7, lines 17-22)

and

...or modified along the chain by silanol functions with at least one organosilane compound comprising one or more amine or imine functions. (column 2, lines 17-20)

18. Applicant's arguments are not persuasive.
19. The language cited by Applicant states that the elastomer is modified with a silanol function that has an organosilane with an amine function. This shows the siloxane functionalized polymer was reacted with the amine. It is examiner's position that the above cited sections of US'479 do not teach mixtures, but final products with the amine incorporated into the polymer. Therefore, US'479 teaches the *reaction* of the amine with the siloxane functionalized polymer.
20. Further, the Applicant points to the examples taught in US'479. Examples 1-3 teach the combination of a functionalized polymer which is mixed with various amine compounds. Reaction between the functionalized polymer and the amine compounds clearly occurs as evidenced by the improved reinforcement and hysteresis properties compared with non-functionalized polymers and the observation that addition of the amine has practically no effect on the non-functionalized polymers (column 10, line 45-column 11, line 10). Alternatively, the examples 1-3 show a preferred embodiment; however all disclosures, "including unpreferred embodiments" must be considered. *In re*

*Lamberti* 192 USPQ 278, 280 (CCPA 1976) citing *In re Mills* 176 USPQ 196 (CCPA 1972).

21. Because of the above, Applicant's arguments are not persuasive.

### ***Conclusion***

22. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ROBERT C. BOYLE whose telephone number is (571)270-7347. The examiner can normally be reached on Monday-Friday, 9:00AM-5:00PM Eastern.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on (571)272-1119. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/R. C. B./  
Examiner, Art Unit 1796

/Vasu Jagannathan/  
Supervisory Patent Examiner, Art Unit 1796